

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A computer-implemented method for identifying relationships between text documents and structured variables pertaining to said text documents, comprising:
 - ~~providing~~ generating a dictionary of keywords in said text documents;
 - forming categories of said text documents using said dictionary and an automated algorithm;
 - counting occurrences of said structured variables, said categories, and combinations of said structured variables and said categories for said text documents; ~~and~~
 - calculating probabilities of occurrences of said combinations of structured variables and categories; ~~and~~
 - identifying a relationship between a structured variable of said structured variables and text documents included in a category of said categories based on a probability of occurrence of a combination of said structured variable and said category to identify a relationship between said text documents and said structured variables.
2. (Original) The method according to claim 1, wherein said algorithm comprises a keyword occurrence algorithm and wherein each of said categories comprises a category of text documents in which a particular keyword occurs.
3. (Original) The method according to claim 1, wherein said algorithm comprises a clustering algorithm and wherein each of said categories comprises a category of said text documents containing a particular cluster.
4. (Original) The method according to claim 3, wherein said clustering algorithm comprises a k means algorithm.
5. (Previously presented) The method according to claim 3, wherein said forming said categories comprises inputting a predetermined number of categories.
6. (Previously presented) The method according to claim 2, wherein said forming said categories comprises:

generating a sparse matrix array containing a count of each of said keywords in each of said text documents.

7. (Previously presented) The method according to claim 1, wherein said keywords comprise at least one of words and phrases which occur a predetermined number of times in said text documents.

8. (Original) The method of claim 1, wherein said calculating probabilities comprises using a Chi squared function.

9. (Currently amended) The method of claim 6, wherein said providing ~~generating~~ a dictionary of keywords comprises:

first parsing text in said text document to identify and count occurrences of words;
storing a predetermined number of frequently occurring words;
second parsing text in said text documents to identify and count occurrences of phrases; and

storing a predetermined number of frequently occurring phrases.

10. (Original) The method according to claim 9, wherein said frequently occurring words and phrases are stored in a hash table.

11. (Previously presented) The method according to claim 9, wherein said generating a sparse matrix array comprises:

third parsing text in said text documents to count a number of times that each of said keywords occurs in each of said text documents.

12. (Previously presented) The method according to claim 1, wherein said relationships comprise said combinations of structured variables and categories having a lowest probability of occurrence.

13. (Canceled)

14. (Currently amended) A computer-implemented method for identifying relationships

between text documents and structured variables pertaining to said text documents, comprising:

- providing ~~generating~~ a dictionary of keywords in said text documents;
- forming categories of said text documents using said dictionary and an automated algorithm;
- counting occurrences of said structured variables, said categories, and combinations of said structured variables and said categories for said text documents; and
- calculating probabilities of occurrences of said combinations of said structured variables and categories, using a Chi squared function; and
- identifying a relationship between a structured variable of said structured variables and text documents included in a category of said categories based on a probability of occurrence of a combination of said structured variable and said category,
- wherein said probabilities comprise a probability that a given co-occurrence of a structured variable and a category would have occurred as a purely random event,
- wherein said keywords comprise at least one of words and phrases which occur a predetermined number of times in said text documents,
- wherein said forming said categories comprises generating a sparse matrix array containing a count of each of said keywords in each of said text documents,
- wherein said algorithm used in said forming said categories comprises a clustering algorithm, each of said categories comprising a category of said text documents containing a particular cluster, and
- wherein said structured variables comprise predetermined time intervals.

15. (Original) The method according to claim 1, wherein said structured variables comprise predetermined time intervals.

16. (Original) The method according to claim 15, wherein said predetermined time intervals comprise one of days, weeks, months and years.

17. (Currently amended) A system for identifying relationships between text documents and structured variables pertaining to said text documents, comprising:

- an input device for inputting text documents;
- a processor for;

forming categories of said text documents; ~~and~~
counting occurrences of said structured variables, categories, and
combinations of said structured variables and said categories; ~~and~~
calculating probabilities of occurrence of said combinations of structured
variables and categories; and
identifying a relationship between a structured variable of said structured
variables and text documents included in a category of said categories based on a probability
of occurrence of a combination of said structured variable and said category to identify a
~~relationship between said text documents and said structured variables; and~~
a display for displaying said probabilities.

18. (Previously presented) The system according to claim 17, further comprising:
a memory for storing occurrences of said structured variables, categories, and
combinations of structured variables and categories and probabilities of occurrences of said
combinations of structured variables and categories .

19. (Original) The system according to claim 17, wherein said structured variables
comprise predetermined time intervals.

20. (Original) The system according to claim 19, wherein said predetermined time
intervals comprise one of days, weeks, months and years.

21. (Currently amended) The system according to claim 17, wherein said probabilities of
occurrence of said combinations of structured variables and categories comprise system
~~calculates~~ a probability that a given co-occurrence of a structured variable and a category
would have occurred as a purely random event.

22. (Original) The system according to claim 17, wherein said relationships comprise
statistically significant relationships.

23. (Currently amended) A programmable storage medium tangibly embodying a
program of machine-readable instructions executable by a digital processing apparatus to
perform a method for identifying relationships between text documents and structured

variables pertaining to said text documents, said method comprising:

~~providing~~ generating a dictionary of keywords in said text documents;

forming categories of said text documents using said dictionary and an automated algorithm;

counting occurrences of said structured variables, said categories, and combinations of said structured variables and said categories for in said text documents; ~~and~~

calculating probabilities of occurrences of said combinations of structured variables and categories; and

identifying a relationship between a structured variable of said structured variables and text documents included in a category of said categories based on a probability of occurrence of a combination of said structured variable and said category to identify a relationship between said text documents and said structured variables.

24. (Previously presented) The method according to claim 1, wherein said structured variables comprise structured data.

25. (New) The method according to claim 1, wherein said calculating said probabilities comprises using a result of said counting said occurrences of said combinations of said structured variables and said categories.

26. (New) The method according to claim 1, wherein said text documents comprise problem tickets in a helpdesk log, and said period of time comprises dates of said problem tickets.

27. (New) The method according to claim 1, wherein said providing said dictionary of keywords comprises generating said dictionary of keywords.

28. (New) The method according to claim 1, wherein said identifying said relationship comprises:

determining whether said probability of occurrence of said combination of said structured variable and said category is below a predetermined value; and

if said probability is below said predetermined value, designating said relationship as an interesting relationship.